TC-777S-ナシ

Specifications

Power Requirement :	85 Watts, 100-117 Volts AC, 60 c/s (50 c/s optional)
Tape Speeds :	7-1/2 ips or 3-3/4 ips, instantaneous switching
Frequency Response :	30～18,000 cps at 7-1/2 ips ±2 dB 40～15,000 cps at 7-1/2 ips 30～13,000 cps at 3-3/4 ips
Signal to Noise Ratio :	Better than 50 dB
Flutter and Wow :	Less than 0.12% at 7-1/2 ips Less than 0.18% at 3-3/4 ips
Bias Frequency :	Approx. 90 Kc
Level Indication :	VU Meters, calibrated to 0 dB at 12 dB below saturation
Inputs :	Microphone −65 dB (0.44 mV), 600Ω (unbalanced) Line −12 dB (0.2 V), 10 KΩ (unbalanced) Rec/PB Connector (DIN)
Outputs :	Line Output (switched) 0 dB (0.775 V), 600Ω (unbalanced) 0 dB (0.775 V), 10 KΩ (unbalanced) Binaural Monitor −3 dB (0.55 V), 10 KΩ (unbalanced)
Motors :	1-Hysteresis-synchronous 2 speed drive motor 2-Four pole induction reel spindle motors
Operating Position :	Either horizontal and vertical
Transistors :	2SB51 (×8), 2SB52 (×14), 2SC42 (×2)
Diodes :	1T2011 (×4), 1T2013 (×1)
Dimensions :	17.5″ W×8.7″ H×17.9″ D (445 W×220 H×455 D mm)
Weight :	Approx. 42 lbs. (19 Kg) (without accessories)

SONY®

SERVICING GUIDE

MECHANICAL DISASSEMBLY PROCEDURE

1. Removal of Chassis from Case

1) Remove A. C. cord from chassis.
2) Remove lid.
3) Remove fuse and cap.
4) Depress Impedance Selector Switch Button.
5) Disconnect A. C. defeat connector.
6) Carefully place recorder face down on soft cloth.
7) Remove Phillips head screws—four each—on right and left side of recorder.
8) Slide case upwards smoothly and evenly.

2. Removal of Perforated Top Cover Panel

1) Remove four screws (one in each corner) and lift out.

3. Removal of Control Panel

1) Remove Volume Control knobs.
2) Remove Record Lock frame by using tip of screw driver under outer edge as lever.
3) Remove four screws located on face of panel and lift off.

4. Removal of Head Cover

1) Loosen two screws on rear of head cover.
2) Pull up head cover evenly from both sides.

5. Removal of Pinch Roller

1) Unscrew (clockwise) cap screw on top of pinch roller.
2) Lift pinch roller off.

6. Removal of Capstan Sleeve

Note : Some models are equipped with removable capstan sleeve for change to 50 cycle (60 cycle) operation. Remove as follows :

1) Unscrew (clockwise) knurled screw on top of capstan.
2) Turn large serrated nut (counter-clockwise) until capstan sleeve is dislodged.

7. Removal of Drive Belt

1) Remove perforated top cover panel.
2) Slip belt from motor pulley.
3) Remove from flywheel on rear side.
4) Clean thoroughly before replacement.

8. Detaching Amplifier Section from Transport

1) Detach all connector plugs. (see figure 1)

2) Unscrew four screws shown in Fig. 2.

9. Removal of Flywheel & Capstan Shaft Assembly

1) Loosen two screws on flange of flywheel sufficiently to clear groove on capstan shaft and lift off.

2) Remove retaining ring (use needle-nose pliers). Ball bearing and shaft may now be removed.

3) Top brass bushing may be removed by gentle pressure from flywheel side of bearing holder, taking precaution against loss of small " key " located in keyway of bushing.

10. Removal of Flutter Filter Assembly

1) Loosen two set screws on inside flange of flywheel sufficiently to prevent damage of shaft " finish " when removing. Hold flywheel and pull shaft and pulley from top side of recorder. Take precaution against loss of small fiber washer and also small ball bearing held in shaft race by heavy grease.

2) Remove retaining ring above tension arm using needle-nose pliers or equivalent. Tension arm may then be removed. Take care not to distort spring.

3) To disassemble brass backing, remove three screws holding triangular bracket. When reassembling, adjust clearance as follows : Loosen lock nut on thrust-bearing screw. Adjust thrust-bearing screw so that there is approximately .025″ clearance between aluminum pulley and " casting ". Hold pulley and shaft against thrust bearing. Slide flyweel against bushing and tighten flywheel set screws. Back off thrust-bearing screw approximately .010″ and tighten lock nut. This should leave approximately .010″ play in entire assembly.

11. Removal of Reel Spindles

1) Remove chassis from case.

2) Remove perforated top cover panel.

3) Loosen two set screws on inner flange of reel spindle and pull off. (Accessibility is easiest from top of chassis when in vertical position.)

Note : Before removing, make note of dimension from reel table to casting face, when chassis is in horizontal position. This will facilitate replacement at proper level for tape-to-tape reel centering.

12. Removal of Motors

1) Remove chassis from case.

2) Remove perforated top cover panel.

3) Each motor is secured to the base by four Phillips head screws.

4) To remove spooling motor, first remove reel spindle, then remove the four Phillips head screws.

5) To remove drive motor, first disengage belt, then remove the four Phillips head screws.

13. Removal of Automatic Cut-off Tension Arm & Cam

1) Remove perforated top cover panel.
2) Remove Phillips head screw from pivot shaft. Note position of coil spring adjustment lug and duplicate for proper tension when reassembling.
3. Remove two small flat head Phillips head screws holding tension arm to phenolic switch cam. Remove tension arm and then switch cam and spring.

14. Removal of Brake Solenoid

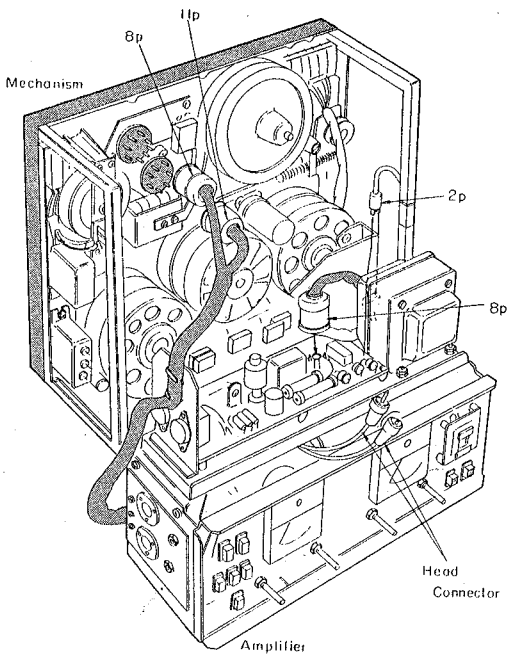
1) Remove perforated top cover panel.
2) Remove the snap washer from the pivot shaft of each brake arm.
3) Slide both brake arms from respective pivots.
4) Remove four side screws holding solenoid to brackets.

Note : Solenoid and plunger are a matched pair and replacement is available as one unit # 1-454-003.

15. Removal of Head Assembly

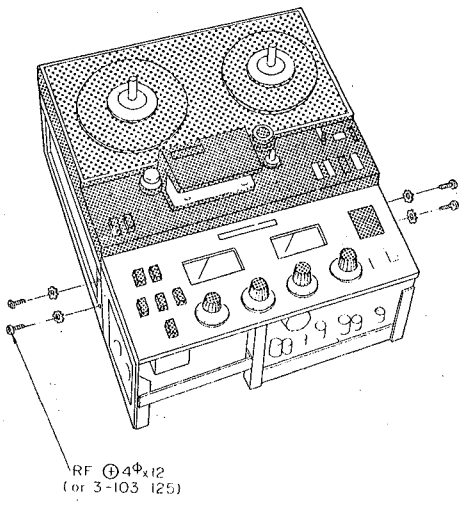
1. Remove chrome decorative strip held by two Phillips head screws.
2. Remove four Phillips head screws holding base plate, one at each corner, and lift out.

Figure 1m



(Fig. 1)

Figure 2m



(Fig. 2)

ALIGNMENT PROCEDURE

1 : 1 GENERAL PRECAUTIONS

1) Demagnetize all tools which will be used to repair or adjust instrument.
2) Do not connect input leads while recording.
3) Do not saturate the Record Amplifier with abnormally high input signals.
4) Do not test continuity of the heads with an ohmmeter or multi-tester.

The record and playback heads may become magnetized due to any of the above or other reasons. This condition will cause an increase in noise level and may partially erase high frequencies on pre-recorded tapes ; therefore, these heads should be demagnetized periodically or when necessary, as follows :

With the recorder switched off and in STOP position, plug a head demagnetizer into an AC outlet. Bring the tips of the demagnetizer into close proximity but not in contact with the head core stacks. Move the tips of the demagnetizer up and down the entire length of the core stack three or four times. Pull back the demagnetizer very slowly until it is about three feet from the heads before disconnecting it from the AC outlet. Repeat if necessary.

1 : 2 TEST EQUIPMENTS

Test Equipments needed for the proper alignment.

a) Audio Oscillator
b) Head Demagnetizer
c) VTVM
d) Step Attenuator
e) Alignment Tape SONY "N-19-F2"
f) High Frequency Ammeter (1.5A full scale)
g) Blank Tape

1 : 3 PLAYBACK AMPLIFIER ALIGNMENT

A. Playback Reference Level

Switch Setting :

1) Speed Selector Switch . . . high
2) Monitor Switch . . . tape
3) Record Selector Switch . . . either
4) Impedance Selector Switch . . . high

Procedure :

1) Connect VTVM(s) to the LINE OUT Jack(s) J_{103}. (Fig. 9).
2) Using the alignment tape, playback the second tone which is a 700 c/s signal recorded at normal operating level.
3) With the VTVM on the 1 V scale, adjust the Playback Volume Control(s) R_{123} (Fig. 16) to obtain the reading of 0 dBs (0.775 V) on each channel. The Volume Controls are now properly set and should not be altered for the remainder of the record/playback alignment procedure. (it is advisable to mark this setting for continued reference.)

B. Azimuth Alignment

The 1st tone of the alignment tape is 10 kc and used for this purpose. The azimuth alignment adjusting screw is localed on the right side of the Playback Head.

With the VTVM set to the 0.3 V scale, turn the screw to obtain a maximum output while playing this portion of the tape.

After proper adjustment has been made, seal the adjustment screw with nail polish or similar sealer.

C. Meter Calibration

1) Playback a 700 c/s signal recorded on the 2nd portion of the alignment tape.
2) Adjust potentiometer(s) R_{145} (Fig. 4) to obtain a reading of 100% or 0 VU on the VU meters. Be sure the playback volume Control (s) have not been moved from preliminary setting in A.

D. Playback Frequency Response

Switch Setting : Same as A.

Following the 700 c/s tone on the alignment tape, there is a sequence of tones used for the frequency response check.

These tones range from 10 kc down to 50 c/s and are recorded 10 dB below operating level. With the VTVM set to the 0.3 V range, playback 700 c/s tone recorded on the third portion of the alignment tape and adjust Potentiometers R_{152} on the printed circuit board (Fig. 4) to obtain reading (s) of 0 dB.

After this adjustment has been made, check the remainder of the frequencies (10 kc, 7.5 kc, 1 kc and 50 c/s) to see that they fall within a ± 2.5 dB range.

1 : 4 RECORD AMPLIFIER ALIGNMENT

A. Erase-Current Adjustment

MEASURING EQUIPMENT ..... High Frequency Ammeter (thermo-couple type, 1.5 A full scale)

Switch Settings :

1) Speed Selector Switch ..... high
2) Monitor Switch ..... tape
3) Record Selector Switch ..... Stereo
4) Impedance Selector Switch ..... high

Procedure :

1) Remove the AMP Connector marked with " 40 " on the printed circuit board of the power supply.
2) Insert the Ammeter between the detached connector and the circuit board.
3) Thread a blank tape and place the unit in record mode.
4) Adjust the slide resistor R_{206} (Fig. 7) to obtain a reading of 1 A on the ammeter.
5) Change the channel selector switch from Stereo to CH-1.
6) Adjust the dummy coil L_{228} (Fig. 7) with a core adjusting tool to obtain a 1 A reading on the ammeter.
7) Change the channel selector switch to CH-2.
8) Adjust the dummy coil L_{227} (Fig. 7) to obtain a 1 A reading on the ammeter.

Note : The preceding steps (6~9) is preliminary adjustments. These coils will be fine-tuned later in the alignment procedure.

B. Bias Trap Adjustment (Power Supply)

MEASURING EQUIPMENT ..... VTVM

Switch Setting : Same as 1 : 4

Procedure :

1) Connect the plus ⊕ lead of the VTVM to AMP connection marked with " 30 " on the printed circuit board. (Do not remove connector from board and the minus ⊖ lead to chassis ground).
2) Thread a blank tape and place unit in record mode.
3) Adjust the core of L_{201} (Fig. 7) to obtain the minimum reading on the VTVM. This reading must be below 6 V.
4) Connect the plus ⊕ lead of the VTVM to AMP connection marked with " 32 " on the printed circuit board.
5) Adjust the core of L_{202} (Fig. 7) to obtain the minimum reading on the VTVM. This reading must be below 6 V.

Note : In the above adjustments, an alignment core tool made of stainless steel, brass or plastic must be used. An iron tool will cause maladjustment.

C. Bias Trap Adjustment (Amplifier Section)

Switch Setting : Same as 1 : 4 A

Procedure :

1) Connect the plus ⊕ lead of the VTVM to the collector of X_{105} in CH-1 of the printed circuit board and the minus ⊖ lead to chassis ground.
2) Thread a blank tape and place unit in record mode.
3) Adjust L_{102} (Fig. 4) in CH-1 (with alignment core tool) for the minimum reading on the VTVM.
4) Connect the VTVM to the similar point in CH-2 and repeat the above procedure 3).

D. Adjustment of Bias Resonant Circuit

Switch Setting : Same as 1 : 4 A

Procedure :

1) Connect the plus ⊕ lead of the VTVM to the terminal of Record Head for CH-1, to which a white lead covered with yellow tube is soldered, and the minus ⊖ lead to chassis ground.
2) Turn the R_{223} to the extreme counter-clockwise position.
3) Thread a blank tape and place unit in record mode.
4) Adjust L_{223} (Fig. 7) for minimum reading on the VTVM.
5) Adjust L_{227} (Fig. 7) carefully so that there will be little or no variation on the VU Meter when the channel selector switch is changed between CH-1 and stereo modes. (Variation must be within IV.)
6) Connect the plus ⊕ lead of the VTVM to the terminal of Record Head for CH-2, to which a white lead covered with black tube is soldered, and the minus ⊖ lead to chassis ground.
7) Repeat steps 2), 3) and 4) above, adjusting L_{224} (Fig. 7) for minimum reading on the VTVM. (approx. 10 V)
8) Adjust the dummy coil L_{228} (Fig. 7) carefully so that there will be little or no variation on the VTVM when the channel selector switch is changed between CH-2 and stereo modes. (Variation must be within 1V.)

E. Recording Bias Adjustment

Switch Setting :

1) Speed Selector Switch ..... high
2) Monitor Switch ..... source
3) Record Selector Switch ..... stereo
4) Impedance Selector Switch ..... high

Procedure :

1) Connect the VTVM (s) to the LINE OUT Jack (s), J_{103}.
2) Feed a 1 kc signal of −30 dBs (2.45 mV) into the Line Input Jack (s), J_{101}.
3) Adjust the Record Level Control (s) R_{162} so that VU Meters indicate 100%.
4) Thread a blank tape and place unit in record mode.
5) Set the monitor Switch to " TAPE ".
6) Set the VTVM on 1 V range.
7) To adjust bias for CH-1, start with Potentiometer R_{223} (Fig. 5) at extreme counter-clockwise position.
8) Turn the Potentiometer R_{223} clockwise slowly. The VTVM reading will go up, reaching a maximum and then falling again. Continue to turn the R_{223} until the VTVM reads 0.5 dB below the maximum reading. (Fig. 6)
9) To adjust bias for CH-2, repeat the above procedures 7) and 8) adjusting the Potentiometer R_{224} in similar manner.
10) Change input signal from 1 Kc to 12 Kc and adjust L_{101} (Fig. 4) to obtain maximum reading on the VTVM (s).

F. Recording Level Adjustment

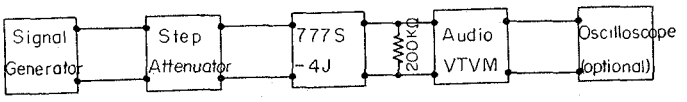
Switch Setting : Same as 1 : 4 A

Procedure :

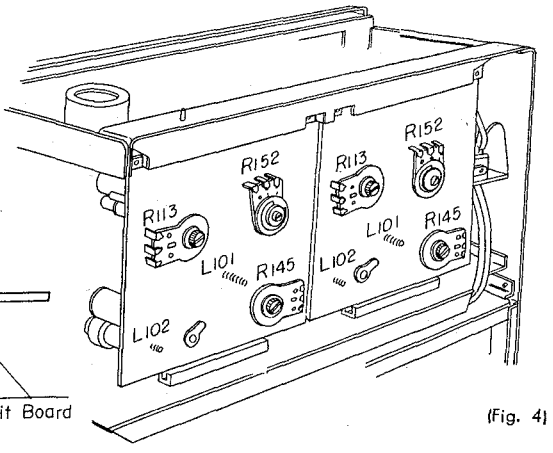
1) Connect the VTVM (s) to the LINE OUT Jack (s) J_{103}.
2) Thread a blank tape and place unit in record mode.
3) Set the Monitor Switch to TAPE.
4) Feed 1 Kc signal of −10 dBs (0.245 V) into the Line Input Jack (s), J_{101}.
5) Adjust the Record Level Controls R_{107} (Fig. 16) to obtain the reading of 0 dBs (0.775 V) on the VTVM. VU Meters should read 100% ; if not, readjust R_{145} as in paragraph 1 : 3C.

   CAUTION : Be sure the Playback Volume Controls R_{123} (Fig. 16) have not been moved from preliminary setting on 1 : 3 A.
6) Change the Monitor Switch to SOURCE.
7) Adjust the Potentiometer R_{113} (Fig. 4) to obtain the reading of 100% (0 VU) on the VU Meter.

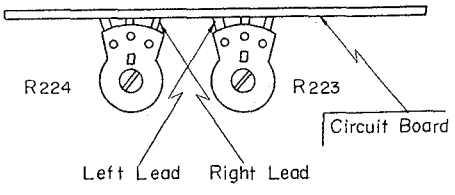
Mesuring Circuit



(Fig. 3)

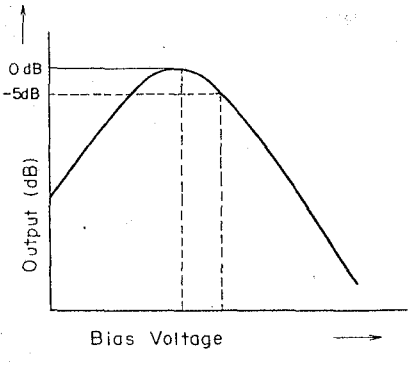


(Fig. 4)

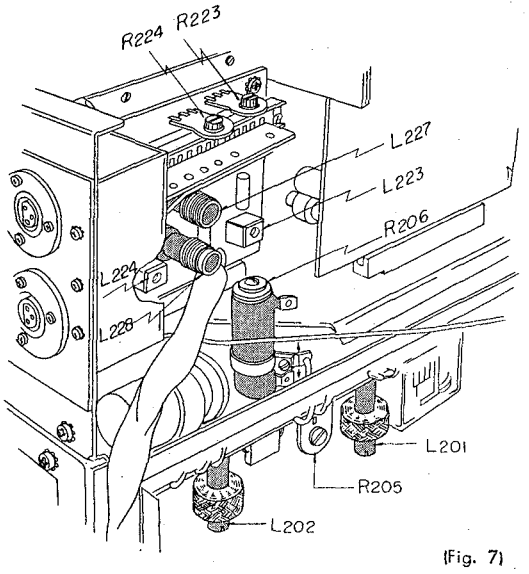


Front View

(Fig. 5)



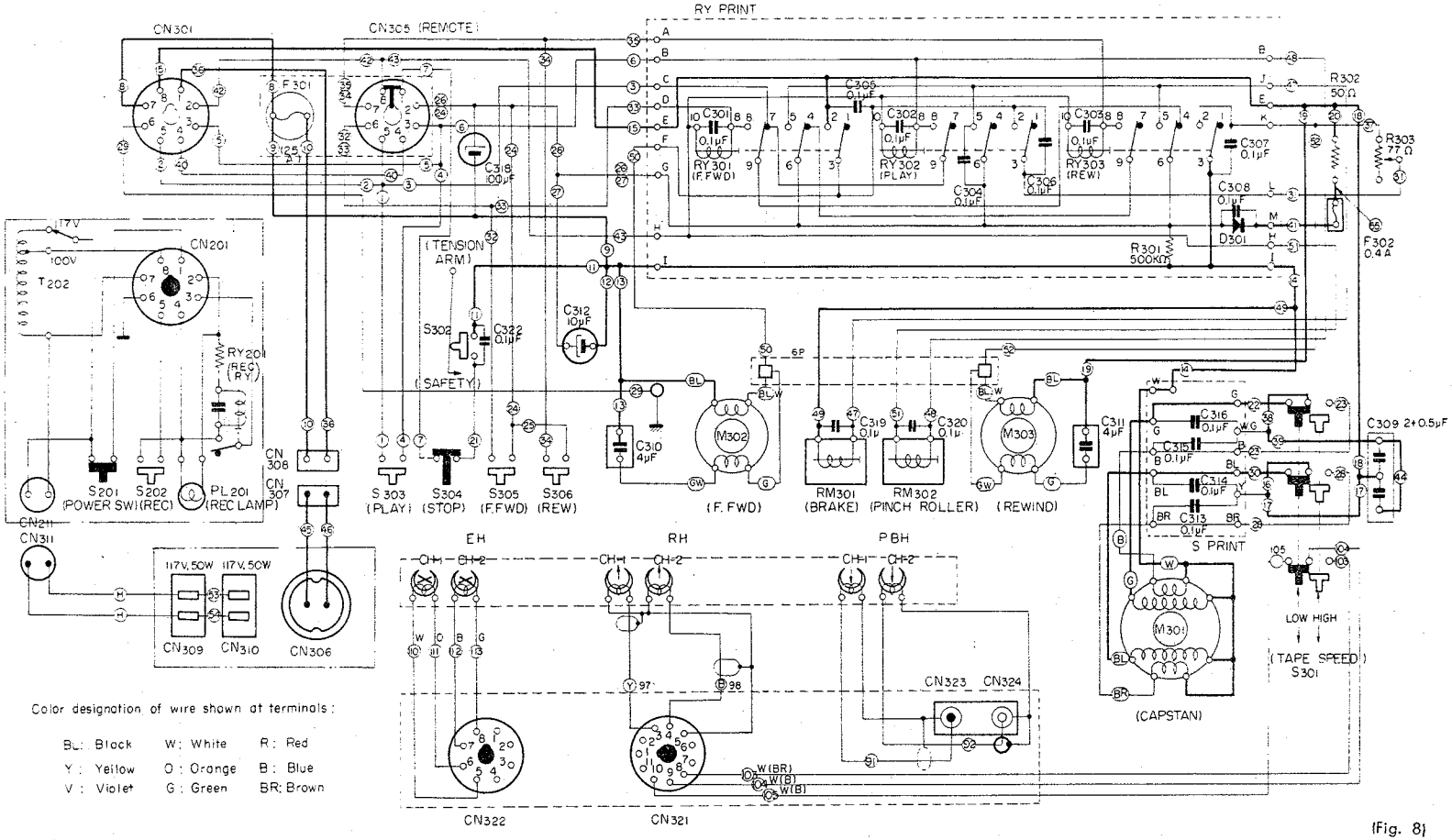
(Fig. 6)



(Fig. 7)

Schematic Diagram

—Tape Transport Control Circuit—



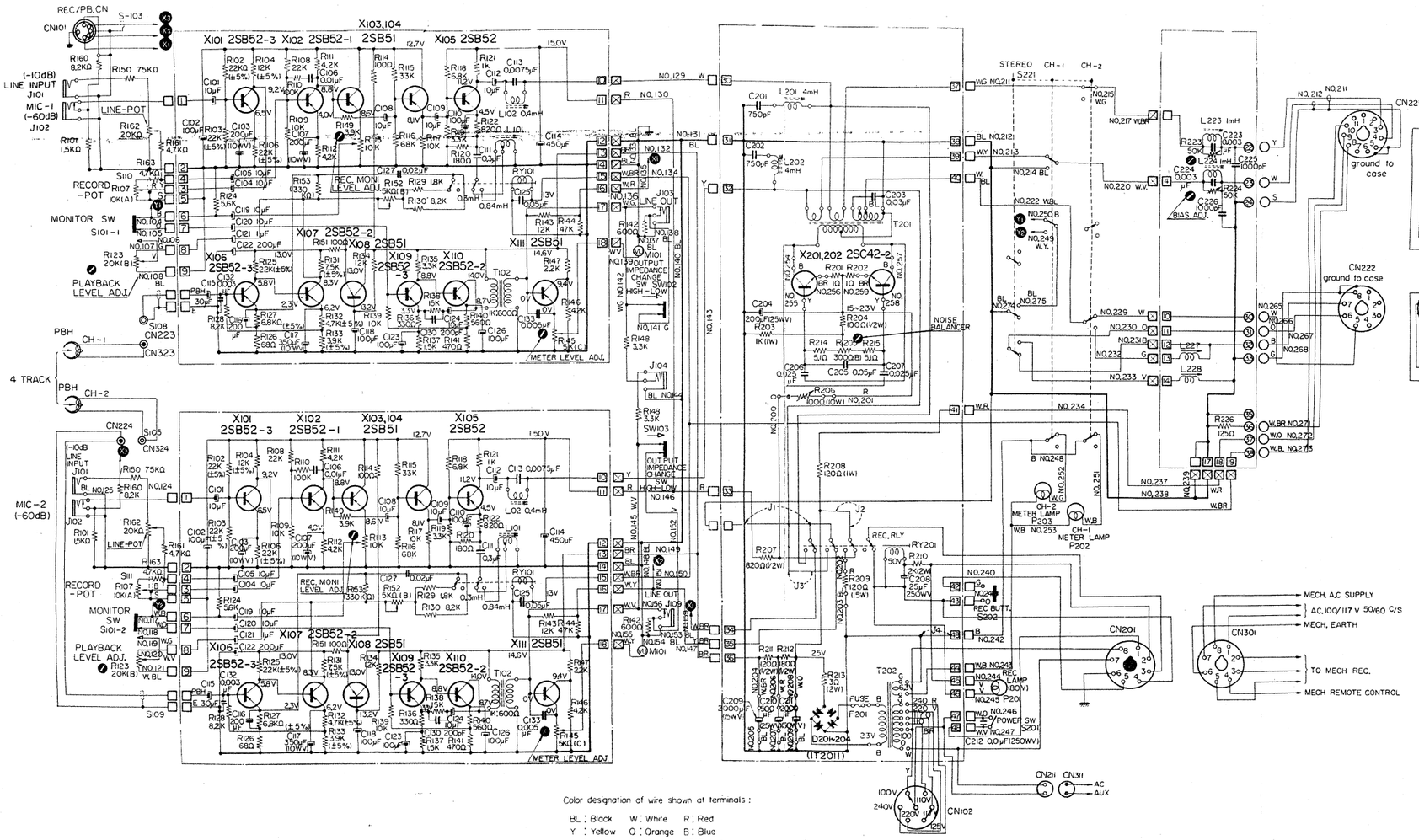
Color designation of wire shown at terminals :

BL: Black	W: White	R: Red	
Y: Yellow	O: Orange	B: Blue	
V: Violet	G: Green	BR: Brown	

(Fig. 8)

Schematic Diagram

—Amplifier Circuit—



Color designation of wire shown at terminals :

BL : Black	W : White	R : Red
Y : Yellow	O : Orange	B : Blue
V : Violet	G : Green	BR : Brown

Numerals at terminals are merely manufacturers wire specifications.

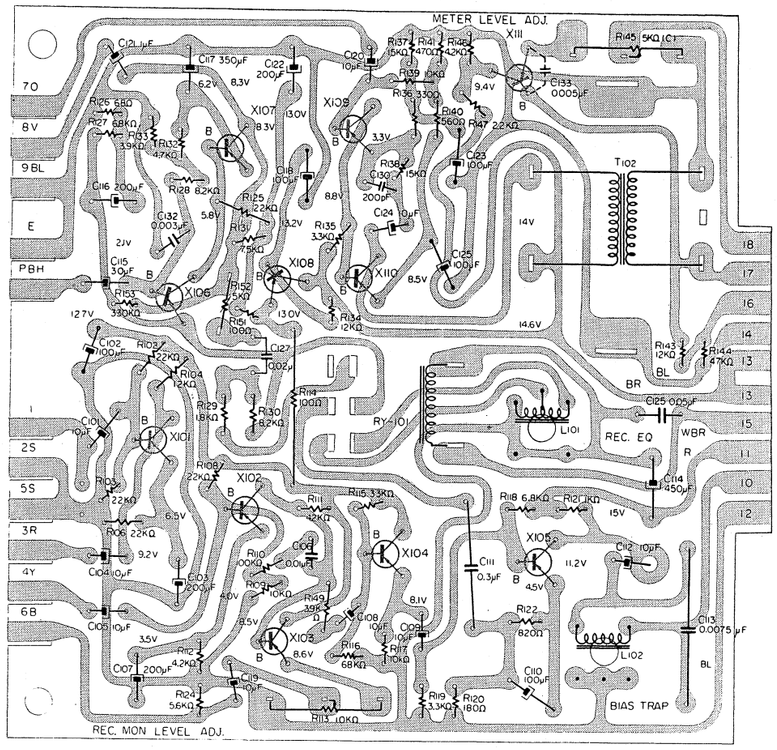
Voltages shown are measured by VTVM across ground when in low speed recording mode.

(Fig. 9)

Mounting Diagram

—Printed Side—

—Amplifier Section—



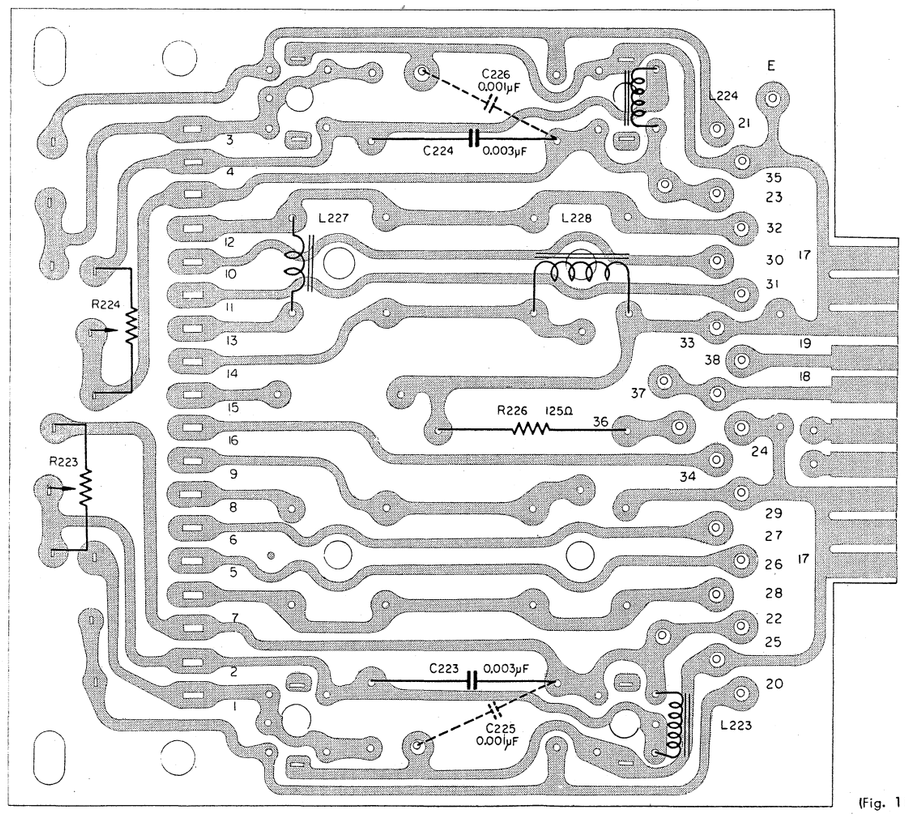
☆ C133 is to be mounted on the printed side.

☆ Voltages shown are measured by VTVM across ground when in low speed recording mode. (Fig. 10)

Mounting Diagram

—Printed Side—

—Bias Adjustment Section—

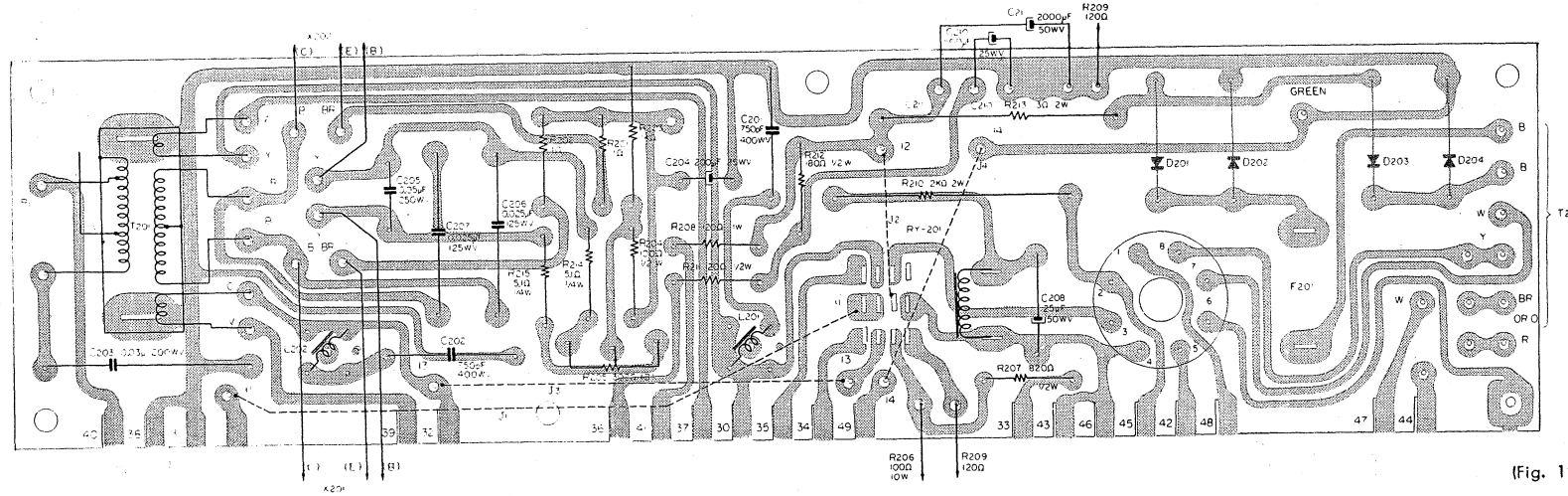


(Fig. 11)

Mounting Diagram

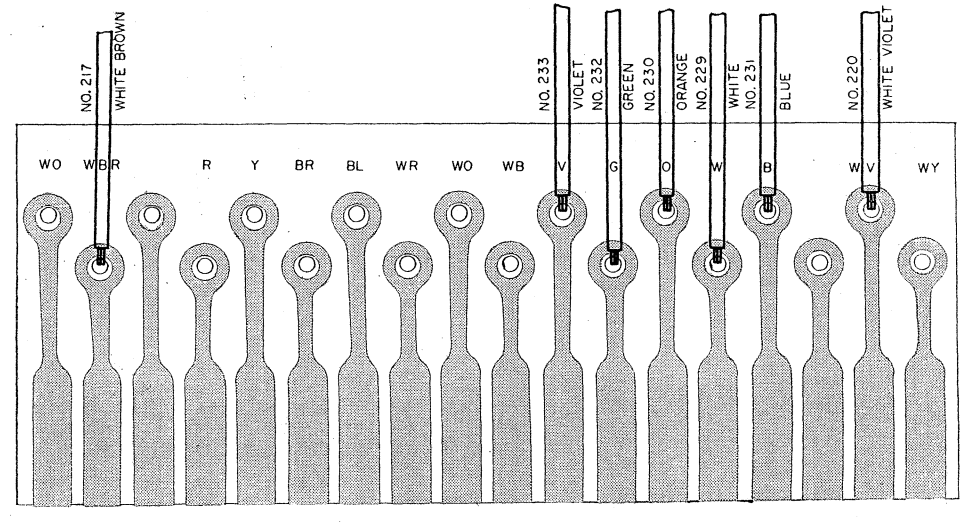
—Printed Side—

—Power Supply Section—



(Fig. 12)

—18P Connection—



(Fig. 13)

Symbol No.	Description	Q'ty	Remarks
X_{101}	Transistor 2SB52-3 with yellow mark	2	
X_{102}	〃 2SB52-1 〃	2	
X_{103}	〃 2SB51	2	
X_{104}	〃 2SB51	2	
X_{105}	〃 2SB52-1 with blue mark	2	
X_{106}	〃 2SB52-3 with yellow mark	2	
X_{107}	〃 2SB52-2 〃	2	
X_{108}	〃 2SB51	2	
X_{109}	〃 2SB52-3 with blue mark	2	
X_{110}	〃 2SB52-2 〃	2	
X_{111}	〃 2SB51	2	
X_{201}	〃 2SC42-2	1	
X_{202}	〃 2SC42-2	1	
D_{201}	Silicon Diode 1T2011	1	
D_{202}	〃 1T2011	1	
D_{203}	〃 1T2011	1	
D_{204}	〃 1T2011	1	
D_{301}	〃 1T2014	1	
D_{302}	〃 1T2014	1	
M_{301}	Capstan Motor HC-634D3	1	
M_{302}	Reel Motor IC-524R1	1	
M_{303}	〃 IC-524R1	1	
RH	Recording Head RP15-2902	1	
PBH	Playback Head PP15-4202L	1	
EH	Erase Head EF13-2902	1	
T_{102}	Output Transformer	2	
T_{201}	Oscillation Transformer	1	
T_{202}	Power Transformer	1	
L_{101}	Record Equalizer Choke Coil (0.84mH-0.3mH)	2	
L_{102}	Choke Coil (0.4 mH)	2	
L_{201}	〃 (4 mH)	1	
L_{202}	〃 (4 mH)	1	
L_{223}	〃 (1 mH)	1	
L_{224}	〃 (1 mH)	1	
L_{227}	Dummy Coil	1	
L_{228}	〃	1	
M_{101}	VU Meter	2	
PM_{301}	Brake Solenoid	1	D57
PM_{302}	Pinch Roller Solenoid	1	D56
J_{101}	Line Input Jack	2	
J_{102}	MIC Input	2	
J_{103}	Line Output Jack	2	
J_{104}	Binaural Jack	1	
S_{101}	Monitor Switch	2	
S_{102}	Output Impedance Change Switch	1	
S_{103}	〃		
S_{201}	Power Switch	1	
S_{202}	Recording Switch	1	
S_{221}	Record Selector Switch	1	
$S_{301-1\sim3}$	Speed Change Switch	3	
S_{302}	Safety Switch	1	
S_{303}	Play Switch	1	
S_{304}	Stop Switch	1	
S_{305}	Fast Forward Switch	1	
S_{306}	Rewind Button Switch	1	
RY_{101}	Relay, 2 pole	2	
RY_{201}	Relay, 4 pole	1	
$RY_{301\sim303}$	Relay for F•FWD, Play & Rewind	3	D58
FH_{201}	Fuse Holder with Cover	1	
F_{201}	Fuse 0.8 A	1	
FH_{301}	Fuse Holder	1	
F_{301}	Fuse 2.5 A	1	
FH_{302}	Fuse Holder	1	
F_{302}	Fuse 0.4 A	1	
PS_{201}	Pilot Lamp Socket	1	
PL_{201}	Pilot Lamp	1	
CN_{101}	REC PB Connector (DIN 5P)	1	
CN_{102}	Voltage Selector Socket	1	
CN_{103}	Receptacle Connector 10 P	1	
CN_{104}	〃 〃 〃	1	
CN_{201}	〃 〃 8 P (male)	1	
CN_{211}	〃 〃 2 P (female)	1	
CN_{221}	〃 〃 11 P (〃)	1	
CN_{222}	〃 〃 8 P (〃)	1	
CN_{226}	〃 〃 10 P	1	
MC	Multi-Connector 18 P	1	
CN_{301}	Receptacle Connector 8 P (female)	1	
CN_{305}	Receptacle Connector 8 P with Switch for Remote Control	1	
CN_{306}	AC Input Connector 2 P (male)	1	
CN_{307}	AC Connector 2 P (female)	1	
CN_{308}	AC Connector 2 P (male)	1	
CN_{309}	AC Outlet Socket	1	
CN_{310}	〃	1	
CN_{311}	AC Connector 1P (male)	1	
CN_{321}	Receptacle Connector 11 P (male)	1	
CN_{322}	〃 〃 8 P (male)	1	
CN_{323}	Pin Jack Connector for PB Head (female and male)	1	
CN_{324}			
E_1	Terminal Strip	3	
E_2	〃 6 P	1	E_4
E_3	〃	2	
E_4	〃 6 P	2	E_2
	Potentiometers		
R_{107}	10 KΩ	2	
R_{113}	10 KΩ (semi fixed)	2	
R_{123}	20 KΩ (〃)	2	
R_{145}	5 KΩ (〃)	2	
R_{152}	5 KΩ (〃)	2	
R_{162}	20 KΩ	2	
R_{205}	300 Ω (semi fixed)	1	
R_{223}	50 KΩ (〃)	1	
R_{224}	50 KΩ (〃)	1	
	Resistors		
R_{101}	1.5 KΩ ¼W Composition	2	
R_{102}	22 KΩ 〃 〃	2	
R_{103}	22 KΩ 〃 〃	2	
R_{104}	12 KΩ 〃 〃	2	
R_{105}	—deleted—		
R_{106}	22 KΩ ¼W Composition	2	
R_{108}	22 KΩ ⅛W 〃	2	
R_{109}	10 KΩ 〃 Carbon	2	
R_{110}	100 KΩ ¼W Composition	2	
R_{111}	4.2 KΩ 〃 〃	2	
R_{112}	4.2 KΩ 〃 〃	2	
R_{114}	100 Ω 〃 〃	2	
R_{115}	33 KΩ 〃 〃	2	
R_{116}	68 KΩ 〃 〃	2	
R_{117}	10 KΩ 〃 〃	2	
R_{118}	6.8 KΩ 〃 〃	2	
R_{119}	3.3 KΩ 〃 〃	2	
R_{120}	180 Ω 〃 〃	2	
R_{121}	1 KΩ 〃 〃	2	
R_{122}	820 Ω 〃 〃	2	
R_{124}	5.6 KΩ 〃 〃	2	
R_{125}	22 KΩ ⅛W Carbon (noiseless)	2	
R_{126}	68 Ω ¼W Composition	2	
R_{127}	6.8 KΩ 〃 〃	2	

Symbol No.	Description	Q'ty	Remarks
R_{128}	8.2 KΩ ¼W Composition	2	
R_{129}	1.8 KΩ // //	2	
R_{130}	8.2 KΩ // //	2	
R_{131}	7.5 KΩ // //	2	
R_{132}	4.7 KΩ ⅛W Cabon (noiseless)	2	
R_{133}	3.9 KΩ // // //	2	
R_{134}	12 KΩ ¼W Composition	2	
R_{135}	3.3 KΩ // //	2	
R_{136}	330 Ω // //	2	
R_{137}	1.5 KΩ // //	2	
R_{138}	15 KΩ // //	2	
R_{139}	10 KΩ // //	2	
R_{140}	560 Ω // //	2	
R_{141}	470 Ω // //	2	
R_{142}	600 Ω // //	2	
R_{143}	12 KΩ // //	2	
R_{144}	47 KΩ // //	2	
R_{146}	4.2 KΩ // //	2	
R_{147}	2.2 KΩ // //	2	
R_{148}	3.3 KΩ // //	2	
R_{149}	3.9 KΩ // //	2	
R_{150}	75 KΩ // //	2	
R_{151}	100 Ω // //	2	
R_{153}	220 KΩ ⅛W Carbon	2	
R_{160}	8.2 KΩ ¼W Composition	2	
R_{161}	4.7 KΩ // //	2	
R_{163}	4.7 KΩ // //	2	
R_{201}	1 Ω Wire Wound	1	
R_{202}	1 Ω //	1	
R_{203}	1 KΩ 1W Composition	1	
R_{204}	100 Ω ½W //	1	
R_{206}	100 Ω 10W Enameled	1	
R_{207}	820 Ω ½W Composition	1	
R_{208}	120 Ω 1W //	1	
R_{209}	120 Ω 15W Enameled (semi-fixed)	1	
R_{210}	2 KΩ 2W Carbon	1	
R_{211}	120 Ω ½W Composition	1	
R_{212}	180 Ω // //	1	
R_{213}	3 Ω 2 W Carbon	1	
R_{214}	5.1 Ω ¼W Composition	1	
R_{215}	5.1 Ω // //	1	
R_{226}	125 Ω 2.5W Wire Wound	1	
R_{301}	500 KΩ ¼W Composition	1	
R_{302}	50 Ω 5W Enameled	1	
R_{303}	77 Ω // // (adjustable)	1	
	Capacitors		
C_{101}	10μF 15 V Electrolytic	2	
C_{102}	100μF 15 V //	2	
C_{103}	200μF 10 V //	2	
C_{104}	10μF 15 V //	2	
C_{105}	10μF 15 V //	2	
C_{106}	0.01μF Mylar	2	
C_{107}	200μF 10 V Electrolytic	2	
C_{108}	10μF 15 V //	2	
C_{109}	10μF 15 V //	2	
C_{110}	100μF 15 V //	2	
C_{111}	0.3μF Mylar	2	
C_{112}	10μF 15 V Electrolytic	2	
C_{113}	0.0075μF Polyethylene	2	
C_{114}	450μF 15 V Electrolytic	2	
C_{115}	30μF 12 V //	2	
C_{116}	200μF 10 V //	2	
C_{117}	350μF 10 V //	2	
C_{118}	100μF 15 V //	2	

Symbol No.	Description	Q'ty	Remarks
C_{119}	10μF 15 V Electrolytic	2	
C_{120}	10μF 15 V //	2	
C_{121}	1μF 12 V //	2	
C_{122}	200μF 15 V //	2	
C_{123}	100μF 15 V //	2	
C_{124}	10μF 25 V //	2	
C_{125}	0.05μF Mylar	2	
C_{126}	100μF 15 V Electrolytic	2	
C_{127}	0.02μF Mylar	2	
C_{128}	—deleted—		
C_{129}	—deleted—		
C_{130}	200PF Styrol	2	
C_{131}	—deleted—		
C_{132}	0.003μF Mylar	2	
C_{133}	0.005μF //	2	
C_{201}	750PF Mica	1	
C_{202}	750PF //	1	
C_{203}	0.03μF Polyethylene	1	
C_{204}	200μF 25 V Electrolytic	1	
C_{205}	0.05μF Mylar	1	
C_{206}	0.025μF Polyethylene	1	
C_{207}	0.025μF //	1	
C_{208}	25μF 50 V Electrolytic	1	
C_{209}	2,000μF 15 V //	1	
C_{210}	500μF 25 V //	1	
C_{211}	2,000μF 50 V //	1	
C_{212}	0.01μF Mylar	1	
C_{223}	0.003μF Polyethylene	1	
C_{224}	0.003μF //	1	
C_{225}	1,000PF Mica	1	
C_{226}	1,000PF //	1	
$C_{301\sim307}$	0.1μF 250 V MP	7	
C_{308}	0.1μF 250 V //	1	
C_{309}	2+0.5μF // (Block Type)	1	
C_{310}	4μF //	1	
C_{311}	4μF //	1	
C_{312}	100μF 150 V Electrolytic	1	
$C_{313\sim316}$	0.1μF 250 V MP	4	
C_{317}	—deleted—		
C_{318}	100μF 150 V Electrolytic	1	
C_{319}	0.1μF 250 V MP	1	
C_{320}	0.1μF 250 V //	1	
C_{321}	—deleted—		
C_{322}	0.1μF 250 V MP	1	
	Screws, Washers & Miscellaneous		
	Screws		
	⊕ RF 2 × 3	4	
	⊕ RF 2 × 4	4	
	⊕ RF 2.6 × 4	3	
	⊕ RF 2.6 × 14	2	
	⊕ RF 3 × 4	2	
	⊕ RF 3 × 5	2	
	⊕ RF 3 × 6	33	
	⊕ RF 3 × 6	46	
	⊕ RF [illegible] × 8	15	
	⊕ RF 3 × 8	13	
	⊕ RF 3 × 10	2	
	⊕ RF 3 × 12	13	
	⊕ RF 3 × 12	1	
	⊕ RF 3 × 14	8	
	⊕ RF 3 × 16	2	
	⊕ RF 3 × 20	4	

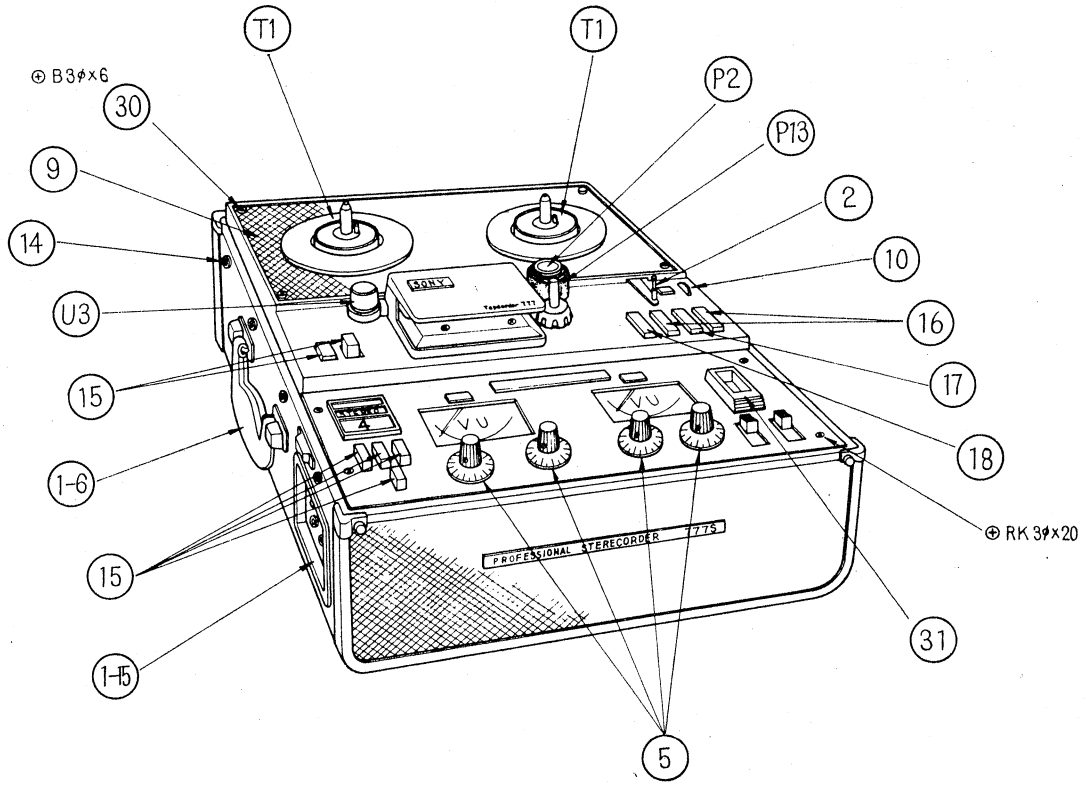
Symbol No.	Description	Q'ty	Remarks	Symbol No.	Description	Q'ty	Remarks
	⊕ RF 4 × 6	2			W 3φ	27	
	⊕ RF 4 × 8	12			W 4φ	11	
	⊕ RF 4 × 10	9			W 3φ (inside)	9	
	⊕ RF 4 × 12	7			W 2.6 (outside)	2	
	⊕ RF 4 × 16	4			W 3φ (outside)	119	
	⊕ RF 4 × 22	11			W 4φ (outside)	42	
	⊕ K 2 × 6	2			**Spring Washers**		
	⊕ K 2.6 × 4	1			SW 2φ	3	
	⊕ K 3 × 6	1			SW 3φ	4	
	⊕ K 3 × 10	2			**Rivet**		
	⊕ K 3 × 14	1			R 3 × 4	4	
	⊕ RK 2 × 3	2			**Grounding Lugs**		
	⊕ RK 2 × 6	2			3φ	5	
	⊕ RK 3 × 20	4			4φ	1	
	⊕ RK 4 × 20	8			**Stop Ring**		
	⊕ T 3 × 6	4			E-2.3	2	
	⊕ T 3 × 25	2			E-4	4	
	⊕ B 3 × 6	4			E-6	1	
	Set Screws				U-3.2	5	
	⊖ 4 × 4	2			U-4	2	
	⊖ 4 × 6	12			**Steel Ball**		
	⊖ 4 × 8	2			3φ	1	
	Nuts				**Eyelets**		
	N 2.6φ	2			1.7 × 3	34	
	N 3φ	25			2 × 3	11	
	N 4φ	8			**Eyelet with Lug**		
	Washers				2 × 3	2	
	W 2φ	2					

Mechanical Parts

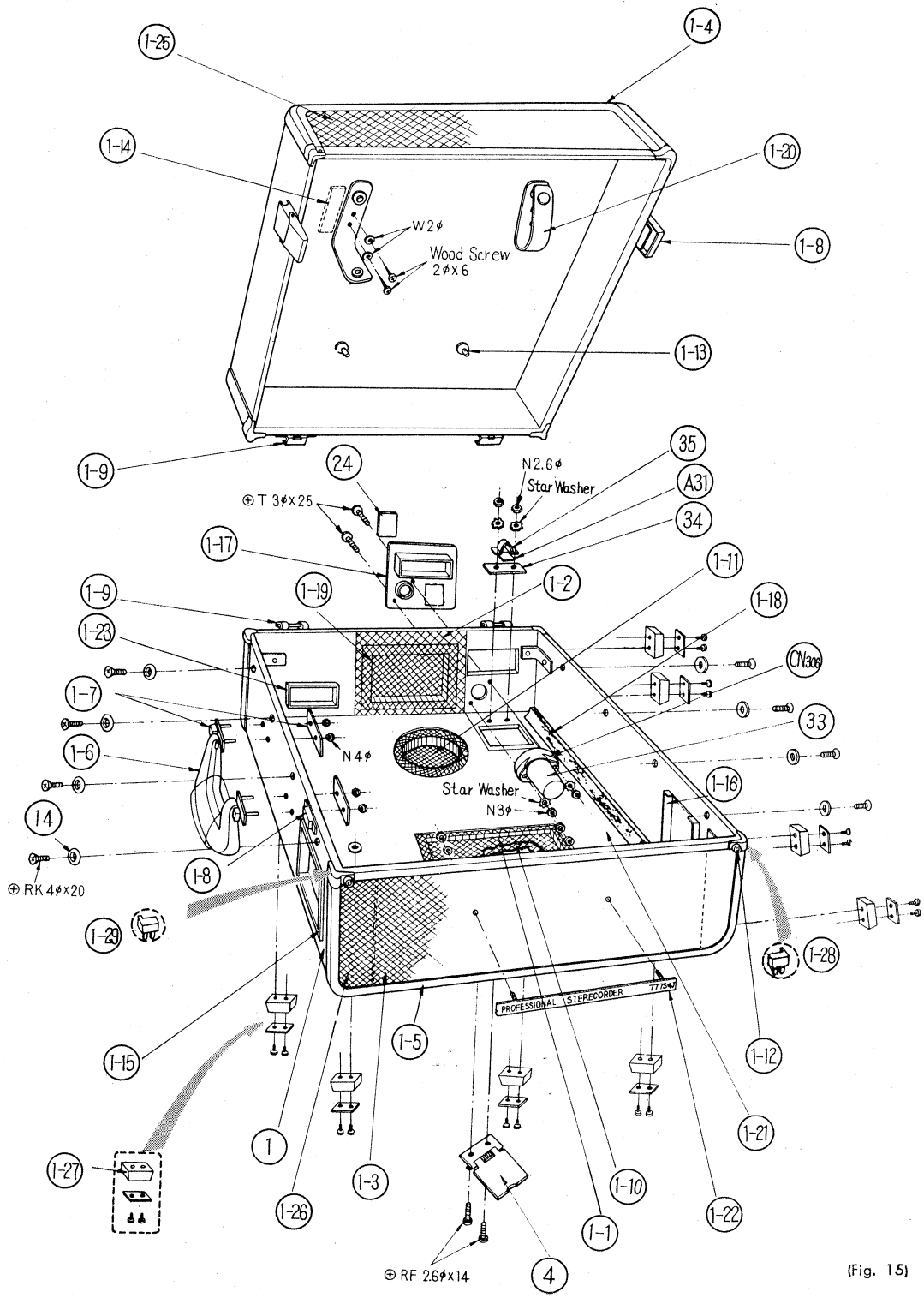
Symbol No.	Description	Q'ty	Remarks	Symbol No.	Description	Q'ty	Remarks
				1-24	Cabinet	(1)	
	1. Cabinet & Appearance Items			1-25	Front Grille Metal (upper)	(1)	
				1-26	Front Grille Metal (lower)	(1)	
				1-27	Rubber Foot	(8)	
1	Cabinet Assembly, including			1-28	Cover (A) for Sash	(4)	
1-1	Dust Proof Cloth (Bottom)	(1)		1-29	Cover (B) for Sash	(4)	
1-2	// (Back)	(1)		2	Tension Arm with Tape Guide	1	D2
1-3	// (Front)	(1)		3	Stabilizer Tension Arm with Tape Guide	1	U2
1-4	Sash for Cabinet Cover	(2)		4	Bottom Lid Assembly	1	
1-5	Sash for Cabinet	(2)		5	Control Knob with Face Plate	4	
1-6	Handle Grip	(1)		6	Head Cover Pin	2	H1
1-7	Handle Grip Washer	2 sets		7	Push Button Damper, Black (Stop, Play, Rec & F • FWD)	4	
1-8	Catch	//		8	Push Button Damper, White (Speed Selector...2, Track Selector...3, AC ON/OFF...1)	6	
1-9	Hinge	//		9	Reel Panel	1	
1-10	Ventilation Grille (rectangular)	(1)		10	Tape Index Counter M-311	1	D19
1-11	Duct Ventilation Grille	(1)		11	Tape Index Counter Cover	1	
1-12	Front Foot	(2)		12	Spacer for SOURCE/MONITOR Switch	2	
1-13	Reel Retainer	(2)		13	Fiber Spacer for Cabinet	2	
1-14	Name Plate " SONY "	2		14	Cabinet Set Washer	8	
1-15	Input Jack Frame	(1)		15	Selector Push Button (S)	6	
1-16	Output Jack Frame	(1)		16	Push Button (s) (Play, Fast Forward, Ivory)	2	
1-17	Frame for Power Connector	(1)		17	Push Button (Stop, Dark Gray)	1	
1-18	Cushion	2		18	Push Button (Rewind, Ivory)	1	
1-19	Ventilation Grille (Back)	(1)					
1-20	AC Cord Retainer	(2)					
1-21	Cabinet Protecting Plate	(1)					
1-22	Badge " STEREO TAPECORDER 777S-4J "	(1)					
1-23	Frame for AC Socket (117V, 50W)	(1)					

Symbol No.	Description	Q'ty	Remarks
19	Head Cover (S)	1	H12
20	Rec. Push Button	1	R5
21	Pilot Lamp Cover	2	
22	Control Knob Cushion	4	
23	Control Panel	1	
24	Serial No. Plate	1	
25	Label " ALL TRANSISTOR "	1	
26	Input Jack Name Plate	1	A25
27	Badge " DELUXE STEREO 4 TRACK "	1	
28	Badge Lock Plate	1	
29	Push Button Cushion	4	
30	Panel Washer	4	
31	Record Button Guard (B)	1	
32	Panel Cushion	4	
33	AC Socket Cover	1	
34	Connector Lid Holding Plate A	1	
35	Connector Lid Holding Plate B	1	
	II.		
	A. Amplifier Block		
A1	Amplifier Chassis Assembly		
A2	Power Supply Chassis Assembly		
A3	AC Socket Holding Plate	1	
A4	Monitor Switch Mounting Plate	1	
A5	Shield Plate B	1	
A6	Fiber Insulator for Power Switch	1	
A7	Power Switch Cover	1	
A8	Connector Support	1	
A9	Panel Support	2	
A10	Stop Bush	2	
A11	Binder	14	
A12	Insulator for Power Switch	1	
A13	Printed Circuit Board (Amp)	2	
A14	Printed Circuit Board (Bias)	1	
A15	Plug for 18 P Connector	1	
A16	Printed Circuit Board (Power Supply)	1	
A17	MIC Input Jack	1	
A18	Output Jack Name Plate	1	
A19	Mylar Insulator for Power Transistor	2	
A20	Insulating Bush for Power Transistor	4	
A21	Ring Clamp for Electrolytic Capacitor	3	
A22	AMP Edge Covering Plate	1	
A23	AMP Edge Covering Plate (C)	1	
A24	MIC Jack Holding Plate	1	
A25	Input Jack Name Plate	1	26
A26	Power Transformer Holding Bracket	1	
A27	Power Transformer Mounting Bracket	2	
A28	Wire Retainer	1	
A29	Ring Clamp for Electrolytic Capacitor	2	
A30	Polyethylene Spacer for Jack	4	
A31	Insulator for AC Cord Retainer	1	
A32	Printed Circuit Board (Relay)	1	
	B. Brake Mechanism		
B1	Brake Band (A) (Take-up) Assembly, including		
B1-1	Brake Band	(1)	
B1-2	Brake Felt	(1)	
B1-3	Brake Band Clasp	(1)	
B2	Brake Band (B) (Rew.) Assembly, including		
B2-1	Brake Band	(1)	
B2-2	Brake Felt	(1)	
B2-3	Brake Band Clasp	(1)	
B3	Brake Arm (A)	1	
B4	Brake Arm (B)	1	
B5	Spring for Brake Arm	2	
B6	Brake Spring	2	
B7	Fiber Washer 5ϕ	2	
	C. Capstan & Flywheel Mechanism		
C1	Bearing Holder	1	
C2	Flywheel for Capstan	1	
C3	Belt for Capstan (Flywheel)	1	
C4	Bearing Metal Pin	1	
C5	Oil Absorber for Capstan	1	
C6	Metal Holding Ring	1	
C7	Capstan Motor Clamp	1	
C8	Capstan Motor Clamp Holder	1	
C9	Radial Bearing	1	
C10	Bearing Holder	1	
C11	Washer for Bearing Holder	1	
C12	Bearing Metal (s)	1	
C13	Spacer for Bearing Holder	1	
C14	Capstan Shaft	1	
C15	Motor Pulley (50 c/s)	1	Z7
C16	〃 (60 c/s)		Z8
C17	Dust Cap	1	
C18	Washer for Capstan Flywheel	1	
	D. Deck		
D1	Shifter Arm	1	
D2	Tension Arm with Tape Guide		2
D3	Base Plate Leg	2	
D4	Base Plate	1	
D5	Head Connector Mounting Plate	1	
D6	Shifter Joint Arm	1	
D7	Adjustable Stop	1	
D8	Tension Arm Spring Holder	1	
D9	Relay Terminal Mounter	2	
D10	Solenoid Mounting Angle (A)	1	
D11	Rubber Damper for Solenoid	1	
D12	Push Button Shaft	1	
D13	Spacer	6	
D14	Push Button Binding Plate	2	
D15	Motor Control Switch Holding Screw	2	
D16	Motor Control Switch Holder	3	
D17	Speed Selector Switch	1	
D18	Selector Switch Holder	1	
D19	Tape Index Counter	1	10
D20	Tape Counter Belt	1	T4
D21	Insulator for Relay	1	
D22	Remote Connector Plate	1	
D23	Terminal Strip (4 P)	1	
D24	Tension Arm Spring	1	
D25	5ϕ Fiber Washer	1	
D26	Reinforcing Plate for Base Plate Mounter	1	
D27	Shifter Arm Spring	1	
D28	Return Spring Hook	1	
D29	Panel Support	2	
D30	Felt for Panel Support	2	
D31	Capacitor Cover	1	
D32	Spacer for Head Connector	3	

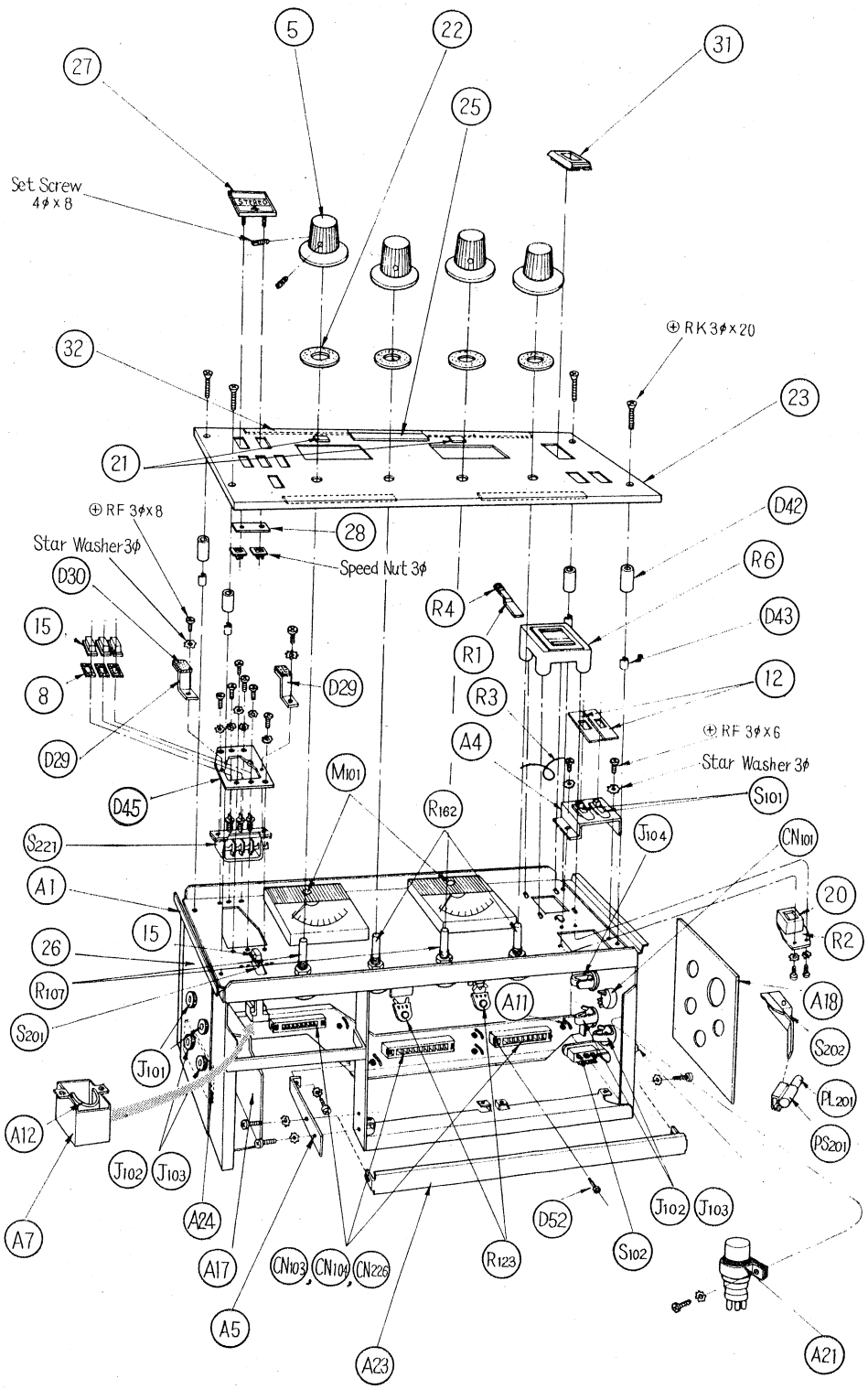
Symbol No.	Description	Q'ty	Remarks
D33	Reinforcing Plate for Base Plate	1	
D34	Relay Mounting Angle	1	
D35	Adjustment Washer	1	
D36	Tension Arm Boss (S)	1	
D37	Micro Switch Adjusting Plate	1	
D38	Tension Arm Damper	2	
D39	Damper Boss (S)	2	
D40	Channel Selector Spring Holder	1	
D41	Solenoid Mounting Angle (S)	1	
D42	Panel Supporting Spacer	4	
D43	Bush for Panel Supporting Spacer	4	
D44	Panel Cushion	4	
D45	Record Button Mounting Bracket	1	
D46	Voltage Selector Mounting Plate	1	
D47	Channel Selector Spring	3	
D48	Solenoid Holding Screw	3	
D49	Cushion for Solenoid	3	
D50	Steel Wire for Channel Selector Switch	1	
D51	Solenoid Pin	1	P11
D52	Connector Holding Screw	6	
D53	Wire Retainer	5	
D54	Pinch Roller Solenoid	1	PM_{302}
D55	Brake Solenoid	1	PM_{301}
D56	Relay MK-3 type	3	$RY_{301\sim303}$
D57	Insulator Damper	4	
	H. Head Deck		
H1	Head Cover Pin	1	6
H2	Head Apron	1	
H3	Shield Plate (B) for Head	1	
H4	Head Plate	1	
H5	Shield Case for Head	1	
H6	Head Lead Connector Mounting Plate	1	
H7	Shield Cover for Head	1	
H8	Tape Guide Spring	1	
H9	Tape Guide Shaft	1	
H10	Tape Guide C	1	
H11	Tape Guide D	1	
H12	Head Cover S	1	19
H13	Head Shield Plate Reinforcing Plate	1	
H14	Head Adjusting Screw	4	
H15	Spacer for Head Mount	3	
H16	Recording Head Fixing Screw	2	
H17	Spring for Recording Head	2	
H18	Playback Head PP15-4202L	1	PBH
H19	Recording Head RP15-2902	1	RH
H20	Erase Head EF13-2902	1	EH
	P. Pinch Roller Mechanism		
P1	Pinch Roller Arm (S) Assembly	1	
P2	Pinch Roller Cap (B)	1	
P3	Pinch Roller Cap Plate	1	
P4	Pull Rod for Solenoid	1	
P5	Pressure Spring	1	
P6	Reset Spring	1	
P7	Oil Retainer (Felt)	1	
P8	Felt Washer	1	
P9	Vulcanized Fiber Washer (7ϕ)	1	
P10	Pressure Spring Washer	2	
P11	Solenoid Pin	1	D51
P12	6ϕ Nylon Washer	2	
P13	Pinch Roller (S)	1	
P14	Adjusting Washer	2	
	R. Recording Mechanism		
R1	Record Button Holding Plate	1	
R2	Leaf Spring for Record Button	1	
R3	Spring for Record Button Guard	1	
R4	Spring for Record Button Holding Plate	1	
R5	Record Push Button	1	20
R6	Record Button Guard (A)	1	
	T. Reel Table Mechanism		
T1	Reel Table	2	
T2	Reel Spindle Set Screw	4	
T3	Rubber Disc on Reel Table	2	
T4	Tape Counter Belt	1	D20
T5	Reel Table Set Spring	2	
	U. Stabilizer Mechanism		
U1	Stabilizer Metal	1	
U2	Stabilizer Tension Arm with Tape Guide	3	
U3	Stabilizer Shaft with Cover	1	
U4	Metal Retainer	1	
U5	Stabilizer Flywheel	1	
U6	Stabilizer Thrust Support	1	
U7	Thrust Adjusting Screw	1	
U8	Thrust Support	1	
U9	Lock Nut for Thrust Adjusting Screw	1	
U10	Stabilizer Spring	1	
U11	Spacer for Stabilizer Metal	1	
U12	3ϕ Steel Ball	1	
	Z. Accessories & Packing Materials		
Z1	Carton Assembly	1	
Z2	Reel Cap	1	
Z3	Polyethylene Bag (for Cabinet)	1	
Z4	Carton for Accessory Bag	1	
Z5	Accessory Bag	1	
Z6	Carton for Microphone	2	
Z7	Motor Pulley	1	C15
Z8	〃		C16
Z9	Tack Label C	1	
Z10	〃 D	1	
Z11	Instruction Manual	1	
Z12	Earphone Bag	1	
Z13	Desiccant	1	
Z14	Microphone F-81 (LQ)	2	
Z15	Magnetic Recording Tape Super-7	1	
Z16	Reel R-7A	1	
Z17	Splicing Tape	1	
Z18	Remote Control	1	
Z19	Tool Set	1	
Z20	Stereo Head Set DR-1C	1	
Z21	AC Power Cord DK-11	1	
Z22	SONY Rec/PB Cord RC-2	1	
Z23	SONY Connection Cord RK-55	1	
Z24	SONY Oil (OL-1K)	1	


T1
T1
⊕ B3φ×6
30
P2
P13
9
2
14
10
U3
16
15
17
18
1-6
⊕ RK 3φ×20
15
31
1-15
5
SONY
PROFESSIONAL STERECORDER 777S
VU
VU

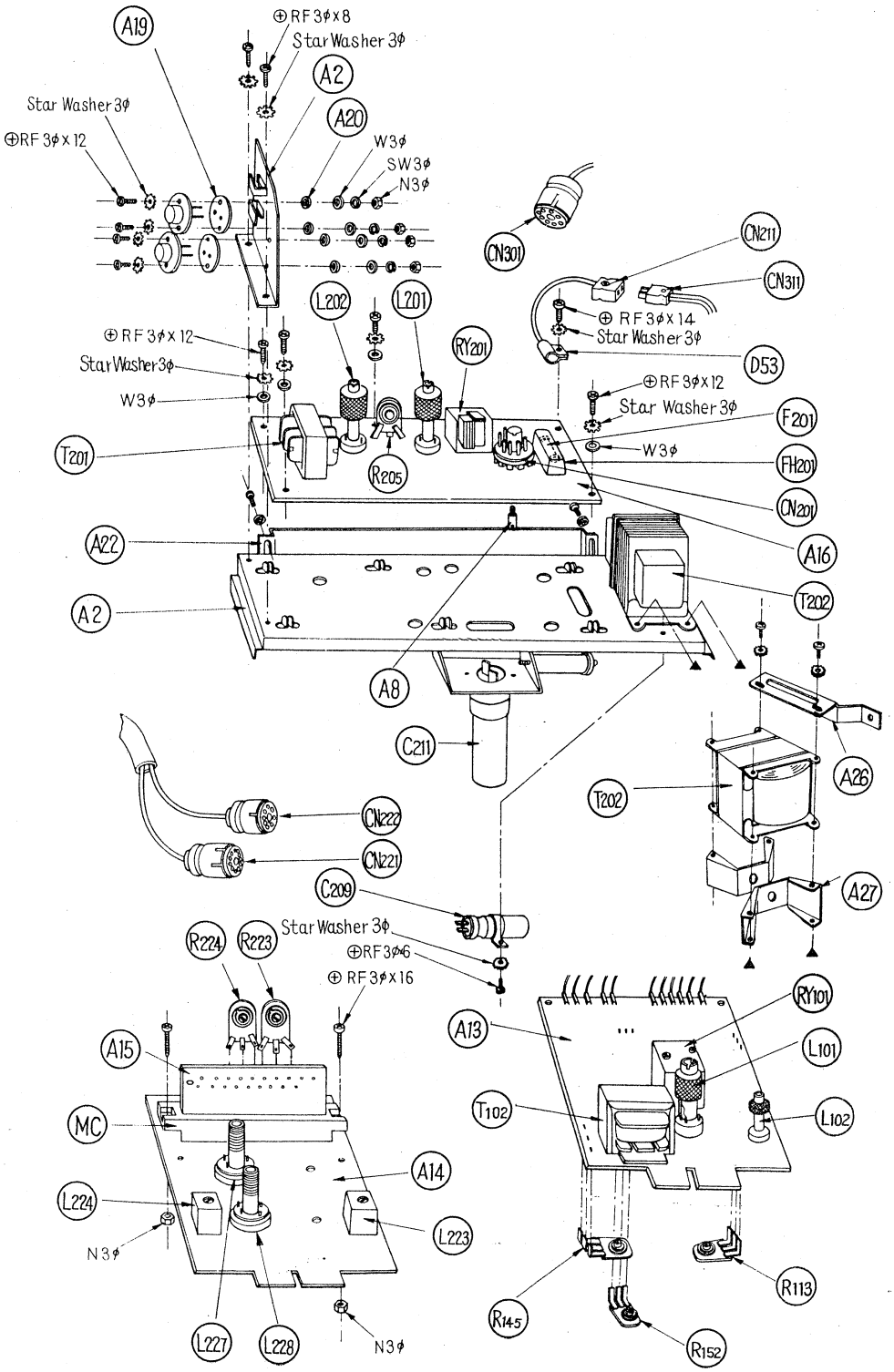
(Fig. 14)


1-25
1-4
1-14
1-20
W2φ
Wood Screw
2φx6
1-8
1-13
1-9
24
35
N2.6φ
Star Washer
A31
⊕T 3φx25
34
1-17
1-11
1-9
1-19
1-2
1-18
1-23
CN306
1-7
33
N4φ
1-6
Star Washer
N3φ
1-16
14
1-8
⊕RK 4φx20
1-29
1-28
PROFESSIONAL STEREORECORDER
1-15
1-5
1-12
1-21
1
1-27
1-3
1-10
1-26
1-22
1-1
⊕RF 2.6φx14
4

(Fig. 15)


5
22
31
27
25
Set Screw
4φ×8
⊕RK3φ×20
32
23
21
⊕RF 3φ×8
28
D42
Star Washer3φ
Speed Nut 3φ
R6
D30
R4
D43
15
R1
8
D29
R3
12
D29
A4
⊕RF 3φ×6
M101
Star Washer 3φ
D45
R162
S101
S221
J104
CN101
A1
20
15
R2
26
R107
A11
A18
S201
S202
J101
PL201
A12
PS201
J102
J103
J102
J103
D52
A24
A7
S102
A17
CN103
CN104
CN226
R123
A5
A23
A21

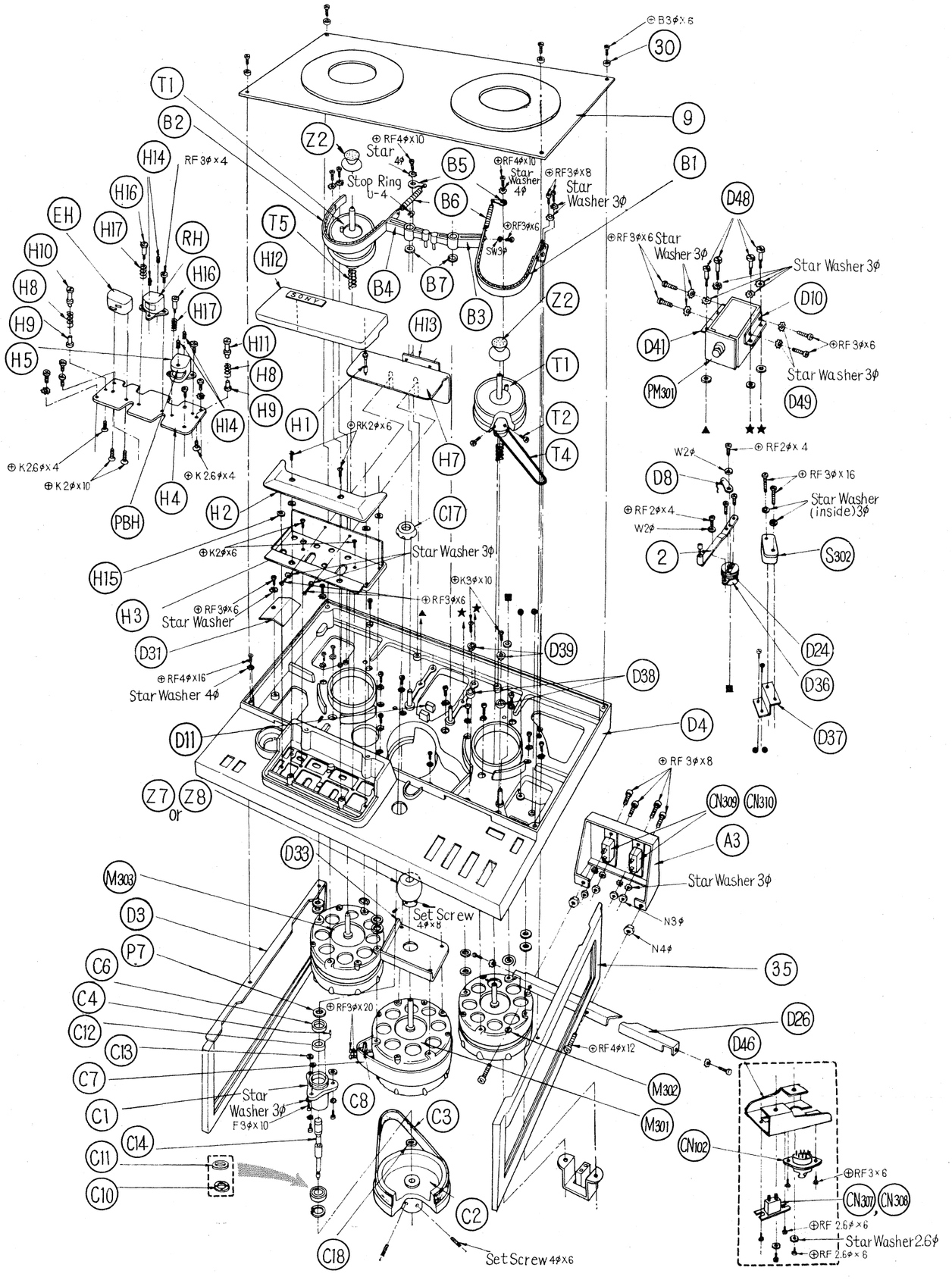
(Fig. 16)


A19
⊕RF 3φx8
Star Washer 3φ
A2
A20
Star Washer 3φ
⊕RF 3φx12
W3φ
SW3φ
N3φ
CN301
CN211
CN311
⊕RF 3φx14
Star Washer 3φ
D53
L202
L201
RY201
⊕RF 3φx12
Star Washer 3φ
W3φ
⊕RF 3φx12
Star Washer 3φ
W3φ
F201
FH201
T201
R205
CN201
A16
A22
T202
A2
A8
C211
A26
T202
CN222
CN221
A27
C209
R224
R223
Star Washer 3φ
⊕RF 3φx6
⊕RF 3φx16
RY101
A13
L101
A15
T102
L102
MC
A14
L224
L223
N3φ
R113
R145
R152
L227
L228
N3φ

(Fig. 17)

Exploded Diagram

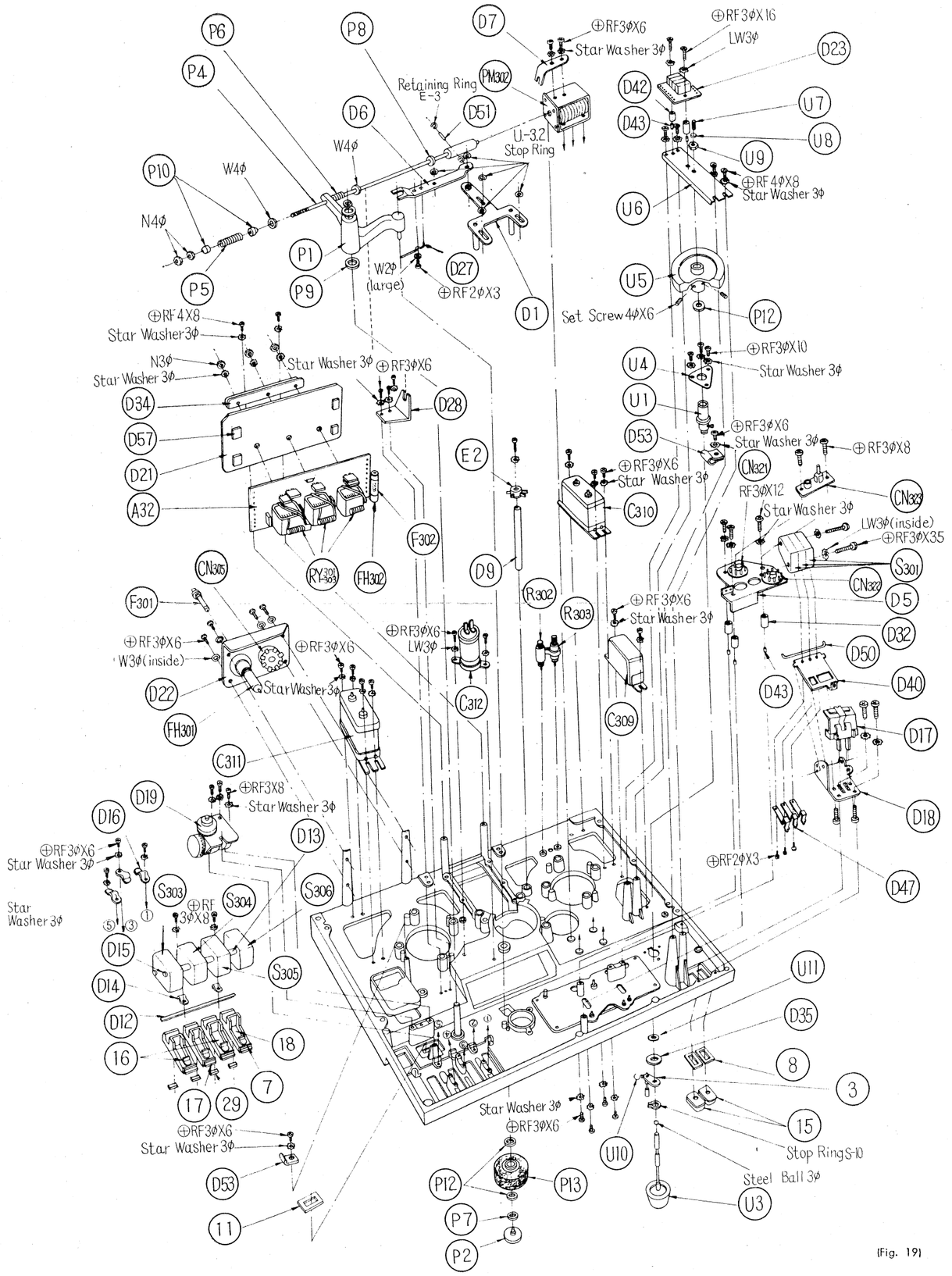
(5)



(Fig. 18)

Exploded Diagram

(6)



(Fig. 19)

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